

What is claimed is:

1 1. A system for encrypting a portion of token data, for recording said token  
2 data with a portion of said token data in an encrypted form on a computer  
3 readable medium, and for reading said token data and decrypting said portion of  
4 said token data, wherein

5 said system comprises a plurality of client computers and a server,  
6 said server generates a secure transfer key pair and encrypts a private  
7 key of said secure transfer key pair,

8 said secure transfer key pair is transferred to each of said client  
9 computers in said plurality thereof with said private key of said secure transfer  
10 key pair in an encrypted form,

11 each client computer in said plurality thereof is programmed to generate  
12 token data including said portion of said token data encrypted with a public key of  
13 said secure transfer key pair, to record said token data on a computer readable  
14 medium, to read said token data from said computer readable medium, to  
15 decrypt said private key of said secure transfer key pair, and to decrypt said  
16 portion of said token data with said private key of said secure transfer key pair.

1 2. The system of claim 1, wherein

2 each client computer in said plurality thereof generates a platform key  
3 pair,

4 a public key of said platform key pair is transferred to said server,

5 said secure transfer key pair is transferred to each of said client  
6 computers in said plurality thereof with said private key of said secure transfer  
7 key pair encrypted with said public key of said platform key pair of said client  
8 computer, and each client computer in said plurality thereof stores said secure  
9 transfer key pair with said private key of said secure transfer key pair encrypted

with said public key of said platform key pair and subsequently decrypts said private key of said secure transfer key pair with said private key of said platform key pair.

3. The system of claim 2, wherein  
each client computer in said plurality thereof includes a security subsystem having a subsystem processor and subsystem storage,  
each client computer in said plurality thereof generates a hardware key pair within said security subsystem  
a private key of said hardware key pair is stored in said subsystem storage, and  
a private key of said platform key pair is encrypted with said hardware public key and is decrypted with said hardware private key in said security subsystem before said private key of said platform key pair is used to decrypt said private key of said secure transfer key pair within said security subsystem.

4. The system of claim 1, wherein each client computer within said plurality of client computers is enabled to perform a predetermined task in response to decrypting said portion of said token data.

5. The system of claim 1, wherein  
each client computer in said plurality of client computers includes an input device for providing a numeric input,  
said portion of said token data includes a PIN,  
each client computer in said plurality of client computers, after decrypting said portion of said token data read from said computer readable medium, compares said PIN included within said token data with said numeric input provided through said input device, and

1           each client computer within said plurality of client computers is enabled to  
2 perform a predetermined task in response to determining an equivalence  
3 between said PIN and said numeric input provided through said input device.

1       6.     The system of claim 1, wherein  
2           said system additionally comprises a communications network connecting  
3 said server with each of said client computers in said plurality thereof, and  
4           said secure transfer key is transmitted over said communications network  
5 from said server to each of said client computers in said plurality thereof with said  
6 private key of said secure transfer key pair in said encrypted form.

1       7.     The system of claim 6, wherein  
2           each client computer in said plurality thereof generates a platform key pair  
3 and transmits a public key of said platform key pair to said server over said  
4 communications network,  
5           said server transmits said secure transfer key pair over said  
6 communications network to each of said client computers in said plurality thereof  
7 with said platform key pair of said client computer, and  
8           each client computer in said plurality thereof stores said secure transfer  
9 key pair with said private key of said secure transfer key pair encrypted with said  
10 public key of said platform key pair and subsequently decrypts said private key of  
11 said secure transfer key pair with said private key of said platform key pair.

1       8.     The system of claim 1, wherein  
2           said server writes said secure transfer key pair on a computer readable  
3 medium with said private key of said secure transfer key pair in said encrypted  
4 form, and



7 after storing said secure transfer key pair, in response to an indication that token  
8 data is to be recorded, encrypting a portion of said token data with a public key of  
9 said secure transfer key pair; and recording said token data, including said  
10 portion of said token data encrypted with said public key of said secure transfer  
11 key pair on a computer readable medium; and  
12 after storing said secure transfer key pair, in response to an indication that token  
13 data is to be read, reading said token data from a computer readable medium,  
14 and decrypting a portion of said data with a private key of said secure transfer  
15 key pair.

1 11. The method of claim 10, wherein said secure transfer key pair is received  
2 from said server over a communications network.

1 12. The method of claim 11, additionally comprising:  
2 generating and storing a platform key pair;  
3 transmitting a public key of said platform key pair to said server over said  
4 communications network, wherein said secure transfer key pair is subsequently  
5 received from said server encrypted with said public key of said platform key pair,  
6 and wherein said private key of said secure transfer key pair is stored encrypted  
7 with said public key of said platform key pair, and  
8 decrypting said private key of said secure transfer key pair with said  
9 private key of said platform key pair before decrypting said portion of said data  
10 with said private key of said secure transfer key pair.

1 13. The method of claim 10, wherein said secure transfer key pair is read from  
2 a computer readable medium.

14. The method of claim 13, additionally comprising:  
generating and storing a platform key pair; writing a public key of said  
platform key pair on a computer readable medium,  
reading said secure transfer key pair from a computer readable medium  
encrypted with said public key of said platform key pair, and wherein said private  
key of said secure transfer key pair is stored encrypted with said public key of  
said platform key pair, and  
decrypting said private key of said secure transfer key pair with said  
private key of said platform key pair before decrypting said portion of said data  
with said private key of said secure transfer key pair.

15. The method of claim 10, additionally comprising:  
generating and storing a hardware key pair within a security subsystem of  
said computing system, wherein a private key of said hardware key pair is stored  
within said security subsystem of said computing system;  
encrypting said private key of said platform key pair with said public key of  
said hardware key pair, wherein said platform key pair is stored with said private  
key of said platform key pair encrypted with said public key of said hardware key  
pair; and  
decrypting said private key of said platform key pair with said private key  
of said hardware key pair within said security subsystem before decrypting said  
private key of said secure transfer key pair with said private key of said platform  
key pair.

16. The method of claim 10, additionally comprising enabling performance of  
a predetermined task in response to decrypting said portion of said data with said  
private key of said secure transfer key pair.

1 17. The method of claim 10, wherein  
 2 said portion of said token data includes a PIN, and  
 3 said method additionally comprises receiving a numeric input from an  
 4 input device, comparing said PIN with said numeric input from said input device,  
 5 and enabling performance of a predetermined task in response to determining an  
 6 equivalence between said PIN and said numeric input.

1 18. A computer readable medium having recorded thereon computer  
 2 executable instructions for performing a method within a computing system for  
 3 encrypting token data, for recording said token data in an encrypted form on a  
 4 computer readable medium, and for reading and decrypting token data recorded  
 5 on a computer readable medium, wherein said method comprises:  
 6 receiving a secure transfer key pair from said server; storing said secure  
 7 transfer key pair;  
 8 after storing said secure transfer key pair, in response to an indication that  
 9 token data is to be recorded, encrypting a portion of said token data with a public  
 10 key of said secure transfer key pair; and recording said token data, including said  
 11 portion of said token data encrypted with said public key of said secure transfer  
 12 key pair on a computer readable medium; and  
 13 after storing said secure transfer key pair, in response to an indication that  
 14 token data is to be read, reading said token data from a computer readable  
 15 medium, and decrypting a portion of said data with a private key of said secure  
 16 transfer key pair.

1 19. The computer readable medium of claim 18, wherein said secure transfer  
 2 key pair is received from said server over a communications network.

1 20. The computer readable medium of claim 19, wherein said method  
2 additionally comprises:

3 generating and storing a platform key pair;

4 transmitting a public key of said platform key pair to said server over said  
5 communications network, wherein said secure transfer key pair is subsequently  
6 received from said server encrypted with said public key of said platform key pair,  
7 and wherein said private key of said secure transfer key pair is stored encrypted  
8 with said public key of said platform key pair, and

9 decrypting said private key of said secure transfer key pair with said  
10 private key of said platform key pair before decrypting said portion of said data  
11 with said private key of said secure transfer key pair.

1 21. The computer readable medium of claim 18, wherein said secure transfer  
2 key pair is read from a computer readable medium.

1 22. The computer readable medium of claim 21, wherein said method  
2 additionally comprises:

3 generating and storing a platform key pair;

4 writing a public key of said platform key pair on a computer readable  
5 medium,

6 reading said secure transfer key pair from a computer readable medium  
7 encrypted with said public key of said platform key pair, and wherein said private  
8 key of said secure transfer key pair is stored encrypted with said public key of  
9 said platform key pair, and

10 decrypting said private key of said secure transfer key pair with said  
11 private key of said platform key pair before decrypting said portion of said data  
12 with said private key of said secure transfer key pair.



23. The computer readable medium of claim 18, wherein said method additionally comprises:

generating and storing a hardware key pair within a security subsystem of said computing system, wherein a private key of said hardware key pair is stored within said security subsystem of said computing system; encrypting said private key of said platform key pair with said public key of said hardware key pair, wherein said platform key pair is stored with said private key of said platform key pair encrypted with said public key of said hardware key pair; and

decrypting said private key of said platform key pair with said private key of said hardware key pair within said security subsystem before decrypting said private key of said secure transfer key pair with said private key of said platform key pair.

24. The computer readable medium of claim 18, wherein said method additionally comprises enabling performance of a predetermined task in response to decrypting said portion of said data with said private key of said secure transfer key pair.

25. The computer readable medium of claim 18, wherein:

said portion of said token data includes a PIN, and

said method additionally comprises receiving a numeric input from an input device, comparing said PIN with said numeric input from said input device, and enabling performance of a predetermined task in response to determining an equivalence between said PIN and said numeric input.

26. A process of providing electrical signals over a communications network causing computer storage to have stored therein computer executable instructions for performing a method within a computing system for encrypting





32. The process of claim 26, wherein said method additionally comprises enabling performance of a predetermined task in response to decrypting said portion of said data with said private key of said secure transfer key pair.

33. The process of claim 26, wherein:  
said portion of said token data includes a PIN, and  
said method additionally comprises receiving a numeric input from an input device, comparing said PIN with said numeric input from said input device, and enabling performance of a predetermined task in response to determining an equivalence between said PIN and said numeric input.

34. A method for enabling performance of a predetermined task in a remote computer system through use of an encrypted portion of token data recorded in a local computer, wherein said method comprises:  
transferring a secure transfer key pair from said server to said local computer;  
storing said secure transfer key pair within said local computer;  
establishing communication between said remote computer and said server;  
transferring said secure transfer key pair from said server to said remote computer;  
storing said secure transfer key pair within said remote computer;  
encrypting said portion of said token data within said local computer with a public key of said secure transfer key pair;  
recording said token data, including said portion of said token data encrypted with said public key of said secure transfer key pair, within said local computer on a computer readable medium;

17           transporting said computer readable medium from said local computer to  
18           said remote computer;reading said token data, including said portion of said  
19           token data encrypted with said public key of said secure transfer key pair, within  
20           said remote computer from a computer readable medium;  
21           decrypting said portion of said token data within said remote computer  
22           with a private key of said secure transfer key pair; and  
23           enabling said performance of said predetermined task in said remote  
24           computer in response to said portion of said token data.

1           35.    The method of claim 18, wherein said secure transfer key pair is received  
2           from said server over a communications network.

1           36.    The method of claim 34, additionally comprising:  
2           generating and storing a first platform key pair within said local computer;  
3           and  
4           transmitting a public key of said first platform key pair to said server from  
5           said local computer, wherein said secure transfer key pair is subsequently  
6           received by said local computer from said server encrypted with said public key  
7           of said first platform key pair, and wherein said private key of said secure transfer  
8           key pair is stored within said local computer encrypted with said public key of  
9           said first platform key pair.

1           37.    The method of claim 34, wherein said secure transfer key pair is read from  
2           a computer readable medium.



1 40. The method of claim 34, additionally comprising:

2 generating and storing a second platform key pair within said remote  
3 computer;

4 transmitting a public key of said second platform key pair to said server  
5 from said remote computer, wherein said secure transfer key pair is  
6 subsequently received by said remote computer from said server encrypted with  
7 said public key of said second platform key pair, and wherein said private key of  
8 said secure transfer key pair is stored within said remote computer encrypted  
9 with said public key of said second platform key pair, and

10 decrypting said private key of said secure transfer key pair with said  
11 private key of said second platform key pair within said remote computer before  
12 decrypting said portion of said data with said private key of said secure transfer  
13 key pair.

1 41. The method of claim 34, additionally comprising:

2 generating and storing a second hardware key pair within a security  
3 subsystem of said remote computer, wherein a private key of said hardware key  
4 pair is stored within said security subsystem of said remote computer;

5 encrypting said private key of said second platform key pair with said  
6 public key of said second hardware key pair within said remote computer,  
7 wherein said second platform key pair is stored within said remote computer with  
8 said private key of said second platform key pair encrypted with said public key  
9 of said second hardware key pair; and

10 decrypting said private key of said second platform key pair with said  
11 private key of said second hardware key pair within said security subsystem of  
12 said remote computer before decrypting said private key of said secure transfer  
13 key pair with said private key of said second platform key pair.

42. The method of claim 36, additionally comprising enabling performance of a predetermined task within said remote computer in response to decrypting said portion of said data with said private key of said secure transfer key pair.

43. The method of claim 36, wherein  
said portion of said token data encrypted with said public key of said secure transfer key pair includes a PIN, and  
said method additionally comprises receiving a numeric input within said remote computer from an input device, comparing said PIN with said numeric input from said input device, and enabling performance of a predetermined task within said remote computer in response to determining an equivalence between said PIN and said numeric input.

44. A method for establishing a plurality of associated client computers, wherein a client computer in said plurality of associated client computers performs a predetermined task in response to reading and decrypting token data recorded on a computer readable medium, wherein said method comprises:  
generating a secure transfer key pair within a server;  
transferring said secure transfer key pair from said server to each client computer in said plurality of associated client computers;  
storing said secure transfer key pair within each client computer in said plurality of associated client computers;  
encrypting a first portion of token data with a public key of said secure transfer key pair within a first client computer within said plurality of associated client computers;  
recording token data on a computer readable medium, wherein said token data includes said first portion of token data encrypted with said public key of said secure transfer key pair, in said first client computer;



16           transferring said computer readable medium from said first client computer  
17           to a second client computer within said plurality of associated client computers;  
18           reading said token data on said second client computer; and  
19           decrypting said token data encrypted with said public key of said secure  
20           transfer key pair with a private key of said secure transfer key pair in said second  
21           client computer.

1           45.   The method of claim 44, wherein  
2           each client computer within said plurality of associated client computers  
3           generates a platform key pair,  
4           a public key of said platform key pair is transferred from said client  
5           computer to said server,  
6           said private key of said secure transfer key pair is encrypted within said  
7           server with said public key of said platform key pair,  
8           said secure transfer key pair is transferred from said server to said client  
9           computer with a private key of said secure transfer key pair encrypted with said  
10          public key of said platform key pair.

1           46.   The method of claim 45, wherein said secure transfer key pair is  
2           transferred from said server to said client computer on a computer readable  
3           medium.

1           47.   The method of claim 45, wherein said secure transfer key pair is  
2           transferred from said server to said client computer by transmission over a  
3           communications network.



8 storing said secure transfer key pair within each client computer in said  
9 plurality of associated client computers.

1 51. The method of claim 50, wherein  
2 said method additionally comprises receiving a platform key pair from said  
3 client computer within said plurality of associated client computers before  
4 transferring said secure transfer key pair to said client computer,  
5 said secure transfer key pair is transferred from said server to said client  
6 computer with a private key of said secure transfer key pair encrypted with said  
7 public key of said platform key pair.

1 52. The method of claim 51, wherein said secure transfer key pair is  
2 transferred from said server to said client computer over a communications  
3 network.

1 53. The method of claim 51, wherein said secure transfer key pair is  
2 transferred from said server to said client computer as data recorded on a  
3 computer readable medium.